

REMARKS

The present Amendment amends claims 1 and 2, leaves claims 3-6 unchanged and adds new claims 7-15. Therefore, the present application has pending claims 1-15.

Applicants acknowledge the Examiner's indication in paragraph 6 of the Office Action that claims 4-6 are allowed.

Claim 1 stands rejected under 35 USC §103(a) as being unpatentable over Sakamoto (U.S. Patent No. 6,633,571); claim 1 stands rejected under 35 USC §103(a) as being unpatentable over Hurren (U.S. patent No. 6,788,681) in view of Luciani (U.S. Patent No. 6,614,791); and claims 2 and 3 stand rejected under 35 USC §103(a) as being unpatentable over Hurren in view of Luciani and further in view of Shigeki (EP 0952755 A2).

With respect to the 35 USC §103(a) of claim 1 as being unpatentable over Sakamoto, Applicants submit that this rejection is prohibited under 35 USC §103(c) being that Sakamoto qualifies as a reference relative to the present application under 35 USC §102(e) and the invention, as disclosed and claimed in the present application at the time the invention was made was owned or under an obligation to assign to the same entity, namely Hitachi, Ltd. Sakamoto as per the front page thereof was assigned to Hitachi, Ltd. The invention as disclosed and claimed in the present application was at least under an obligation to assign to Hitachi, Ltd., at the time said invention was made. Therefore, the 35 USC §103(a) rejection of claim 1 as being unpatentable over Sakamoto is rendered moot. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

With respect to the remaining rejections Applicants submit that such rejections are traversed for the following reasons. Applicants submit that the features of the present invention as now more clearly recited in claims 1-3 are not taught or suggested by Hurren, Luciani or Shigeki whether taken individually or in combination with each other as suggested by the Examiner.

Amendments were made to claims 1-3 so as to more clearly describe that the present invention is directed to a router, for example, as illustrated as router 9 in Fig. 1 wherein the router is connected to a core network, a first local area network (LAN) belonging to a first virtual private network (VPN), a second LAN belonging to a second VPN, a third LAN belonging to a third a VPN and a fourth LAN belonging to a fourth VPN.

According to the present invention, the router includes a memory, a first interface for accommodating a first LAN connected to the second LAN and the second LAN and for receiving multiplexed internet protocol (IP) packets from the first and second LANs via the first line, the IP packets from the first and second LANs being encapsulated by a first protocol, a second interface connected to the core network, means for identifying which of the first VPN and the second VPN to which an IP packet receives at the first interface belongs by header information of the first protocol and means for registering header information of the first protocol as a VPN identifier for identifying which of the first VPN and the second VPN to which an IP packet received from the first line belongs to the memory. Further, according to the present invention the IP packets from the third and fourth LANs are encapsulated by a second protocol different from the first protocol.

The above described features of the present invention now more clearly recited in the claims are not taught or suggested by Hurren, Luciani or Shigeki whether taken individually or in combination with each other as suggested by the Examiner.

Hurren is directed to a method and apparatus for providing a VPN network over a connectionless network connecting a plurality of LANs. Hurren teaches that the method and apparatus therein associates each VPN with a unique identifier and each LAN of the VPN with an interface device connecting to the LAN to the connectionless network. As per Hurren, each LAN being associated with a user network interface that forms part of the interface device, allows for each data packet destined for a second LAN received by the interface device for a first LAN to be encapsulated with a Media Access Control (MAC) address of the interface device connected to the second LAN, the VPN's unique identifier and the port on the interface device connected to the second LAN additional corresponding MAC and port address of the first interface device is also used to encapsulate the Ethernet frame.

However, at no point is there any teaching or suggestion in Hurren of the unique features of the present invention wherein first and second interfaces are provided. According to the present invention, the first interface accommodates a first line connected to the first LAN and the second LAN and receives multiplex IP packets from the first and second LANs via the first line wherein the IP packets from the first and second LANs are encapsulated by a first protocol and the second interface is connected to the core network.

Further, unique according to the present invention is that means is provided for identifying which of the first and second VPNs to which IP

packets received at the first interface belongs by header information of the first protocol and means for registering header information of the first protocol as a VPN identifier for identifying which of the first VPN and the second VPN to which an IP packet received from the first line belongs. Thus, in the present invention the IP packets from the third and the fourth LANs are encapsulated by a second protocol different from the first protocol.

The above described features of the present invention now more clearly recited in the claims are not taught or suggested by Hurren.

Thus, Hurren fails to teach or suggest a first interface for accommodating a first line connected to the first LAN and the second LAN and for receiving multiplex IP packets from the first and second LANs via the first line, wherein the IP packets from the first and second LANs are encapsulated by a first protocol and a second interface connected to the core network as recited in the claims.

Further, Hurren fails to teach or suggest means for identifying which of the first VPN and the second VPN to which an IP packet received at the first interface belongs by header information of the first protocol and means for registering header information of the first protocol as a VPN identifier for identifying which of the first VPN and the second VPN to which an IP packet receives from the first line belongs to the memory as recited in the claims.

Still further, Hurren fails to teach or suggest that the IP packets from the third and fourth LANs are encapsulated by the second protocol different from the first protocol as recited in the claims.

Therefore, Hurren does not teach or suggest the features of the present invention as now more clearly recited in the claims.

The above described deficiencies of Hurren are not supplied by any of the other references of record namely Luciani and Shigeki.

Luciani is merely directed to a system device and method for supporting multiple private networks in a communications network. However, at no point is there any teaching or suggestion in Luciani of the above described features of the present invention shown above not to be taught or suggested by Hurren of the first and second interfaces, the means for identifying and the means for registering. Thus, Luciani suffers from the same deficiencies of Hurren relative to the features of the present invention now more clearly recited in the claims.

Since both Hurren and Luciani suffers from the same deficiencies relative to the features of the present invention as now more clearly recited in the claims, combining these references in the manner suggested by the Examiner in the Office Action does not render obvious the features of the present invention as now more clearly recited in the claims. Therefore, reconsideration and withdrawal of the 35 USC §103(a) rejection of claim 1 as being unpatentable over Hurren in view of Luciani is respectfully requested.

The above noted deficiencies of Hurren and Luciani are also not taught or suggested by any of the other references of record, namely Shigeki. Shigeki is merely relied upon by the Examiner for an alleged teaching of routing tables. However, at no point is there any teaching or suggestion in Shigeki of the above described features of the present invention now more clearly recited in the claims shown not to be taught or suggested by Hurren or Luciani. Namely, Shigeki does not teach or suggest the above described features recited in the claims regarding the first and second interfaces, the

means for identifying and the means for registering. Further, there is no teaching or suggestion in Shigeki of the above described features of the present invention as recited in the claims that the IP packets from the third and fourth LANs are encapsulated by a second protocol different from a first protocol.

Therefore, combining the teachings of Hurren, Luciani and Shigeki in the manner suggested by the Examiner in the Office Action still fails to teach or suggest the features of the present invention as now more clearly recited in the claims. Accordingly, reconsideration and withdrawal of the 35 USC §103(a) rejection of claims 2 and 3 as being unpatentable over Hurren, Luciani and Shigeki is respectfully requested.

As indicated above, the present Amendment adds new claims 7-15. New claims 7-15 recite many of the same features shown above not to be taught or suggested by any of the references of record particularly Hurren, Luciani and Shigeki. Therefore, the same arguments presented above with respect to claims 1-3 apply as well to new claims 7-15. In fact, new claims 7-15 recite many of the features indicated by the Examiner as being allowable in claims 4-6.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 1-3.

In view of the foregoing amendments and remarks, applicants submit that claims 1-15 are in condition for allowance. Accordingly, early allowance of claims 1-15 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (501.39836X00).

Respectfully submitted,

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